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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,533	03/10/2004	Kurt Hakan Carlsson	71354-0134	9645

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EXAMINER

LEUNG, PHILIP H

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

TAK

Office Action Summary	Application No. 10/708,533	Applicant(s) CARLSSON ET AL.	
	Examiner Philip H. Leung	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-70 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6-10 & 6-14-04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. The drawings filed 3-10-2004 are acceptable.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. The claims filed in the amendment on 6-7-2004 are objectionable because the claim numbers should not be placed in [brackets]. Therefore, all the brackets for each of the claims must be removed.
4. Claim 1 is objected to by the Examiner because the term "the microwave conduits" at the end of the claim has no proper antecedent basis as only a microwave conduit at line 5.
Correction is needed.
5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 13 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakagawa (JP 1-30194).

Nakagawa shows a distributed microwave cooking system, comprising: a microwave generator 1 having an output for providing a single source of microwave energy; multiple cooking elements 9, 10 located remotely from the microwave generator 1; a microwave conduit (branch waveguide 4 having branches) connecting each of the cooking elements to the microwave generator 1; wherein the microwave energy generated by the microwave generator is distributed to the multiple cooking elements through the microwave conduits (see Figures 1-3 and the English abstract).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 2-12, 14-18 and 20 are rejected under 35 U.S.C. 103(a) as being obvious over Nakagawa (JP 1-30194), in view of Berggren (US 4,323,745).

As set forth above, Nakagawa shows every feature as claimed except that it uses a branch waveguide as the microwave transmission conduit. Berggren shows a microwave heating device having a single microwave generator and plural feed ports connected by microwave conduits (43, 44). The conduits are either waveguides or coaxial cables (see Figure 4 and col. 3, lines 3-27). It would have been obvious to an ordinary skill in the art at the time of invention to modify Nakagawa to use a coaxial cable or a branched waveguide as the microwave transmission conduits for feeding microwave energy from the single microwave source to each heating element depending on the overall system requirement, in view of the teaching of Berggren. Obviously, the use of a coaxial cable provides a flexible connection. In regard to claims 16-18, the use of a microwave lossy heating elements for converting microwave energy into thermal energy is well known in the art of microwave cooking, such as microwave susceptors for browning food. In regard to claim 20, the use of a solid state microwave generator is also well known.

9. Claims 21, 29-37, 50-52 and 70 are rejected under 35 U.S.C. 103(a) as being obvious over Nakagawa (JP 1-30194), in view of Perlman et al (US 6,060,700) or Stutman (US 6,759,636).

As set forth above, Nakagawa shows every feature as claimed except that it does not specify the use of the heating elements 9, 10 as in a vehicle or as a cup warmer. Perlman shows a microwave oven used inside a vehicle for heating food or as a cup warmer (see Figures 1-3 and

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col. 6, line 1 – col. 7, line 38). Stutman also shows a microwave oven for used in a vehicle having a door 160 on the top of the housing cabinet 200 (see Figures 2 and 3). It would have been obvious to an ordinary skill in the art at the time of invention to modify Nakagawa to use its device in a vehicle for heating food or beverages as a cup warmer to increase its utilities, in view of the teaching of Perlman or Stutman. The exact connection and location of the cooking elements would have been a matter of engineering expediency depending on the overall structure of the vehicle.

10. Claims 22-28, 38-43 and 53-63 are rejected under 35 U.S.C. 103(a) as being obvious over Nakagawa (JP 1-30194), in view of Perlman et al (US 6,060,700) or Stutman (US 6,759,636), as applied to claims 21, 29-37, 50-52 and 70 above, and further in view of Berggren (US 4,323,745).

As set forth above, Nakagawa combined with Perlman or Stutman shows every feature as claimed except that it uses a branch waveguide as the microwave transmission conduit. Berggren shows a microwave heating device having a single microwave generator and plural feed ports connected by microwave conduits (43, 44). The conduits are either waveguides or coaxial cables (see Figure 4 and col. 3, lines 3-27). It would have been obvious to an ordinary skill in the art at the time of invention to further modify Nakagawa combined with Perlman or Stutman to use a coaxial cable or a branched waveguide as the microwave transmission conduits for feeding microwave energy from the single microwave source to each heating element depending on the overall system requirement, in view of the teaching of Berggren. Obviously, the use of a coaxial cable provides a flexible connection.

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11. Claims 44-49 and 64-69 are rejected under 35 U.S.C. 103(a) as being obvious over Nakagawa (JP 1-30194), in view of Perlman et al (US 6,060,700) or Stutman (US 6,759,636), as applied to claims 21, 29-37, 50-52 and 70 above, and further in view of Jensen (US 5,315,084) or Takizaki (US 4,814,570).


As set forth above, Nakagawa combined with Perlman or Stutman shows every feature as claimed except for the use of a sensor. Jensen shows a microwave oven for heating bottles of liquid food with the use of a weight sensor 88 as a load sensor to determine the volume of liquid to be heated (see Figure 2 and col. 3, lines 37-56). Takizaki also shows that it is well known in the art of microwave heating devices to include many type of sensing devices including a temperature sensor 11 and a weight sensor 9 to control the heating of food (see Figure 9 and col. 6, line 38 – col. 7, line 4). It would have been further obvious to an ordinary skill in the art at the time of invention to modify Nakagawa combined with Perlman or Stutman to use a temperature sensor and/or a weight sensor to monitor the heating conditions of the food material for better heating control and better food product, in view of the teaching of Jensen or Takizaki.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (571) 272-4782.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 472-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Philip H Leung
Primary Examiner
Art Unit 3742

P.Leung/pl
7-8-2005